DEPARTMENT of ENVIRONMENTAL SERVICES Water Supply & Pollution Control Division - Biology Bureau

LAKE TROPHIC DATA

MORPHOMETRIC:

Lake: DUNKLEE POND	Lake Area (ha):	9.71
Town: HOLLIS	Maximum depth (m):	2.1
County: Hillsborough	Mean depth (m):	0.7
River Basin: Merrimack	Volume (m³):	64500
Latitude: 42°46'10" N	Relative depth:	0.6
Longitude: 71°35'05" W	Shore configuration:	3.62
Elevation (ft): 255	Areal water load (m/yr):	19.09
Shore length (m): 4000	Flushing rate (yr ⁻¹):	28.70
Watershed area (ha): 386.4	P retention coeff.:	0.48
% watershed ponded: 3.6	Lake type: natural	w/dam

BIOLOGICAL:	20 January 1992	19 August 1991
DOM. PHYTOPLANKTON (% TOTAL) #1	DINOBRYON 75%	CHRYSOSPHAERELLA 60%
#2	SYNURA 10%	DINOBRYON 25%
#3		
PHYTOPLANKTON ABUNDANCE (cells/mL)		
CHLOROPHYLL-A (µg/L)		5.26
DOM. ZOOPLANKTON (% TOTAL) #1	SPARSE - NO DOMINANT	KERATELLA 57%
#2		NAUPLIUS LARVA 19%
#3		
ROTIFERS/LITER	27	95
MICROCRUSTACEA/LITER	14	25
ZOOPLANKTON ABUNDANCE (#/L)	54	133
VASCULAR PLANT ABUNDANCE		Very abundant
SECCHI DISK TRANSPARENCY (m)		1.8 Visible on bottom
BOTTOM DISSOLVED OXYGEN (mg/L)	9.7	6.9
BACTERIA (fecal col., #/100 ml) #1		
#2		
#3		

SUMMER THERMAL STRATIFICATION:

not stratified

Depth of thermocline (m): None Hypolimnion volume (m³): None Anoxic volume (m³): None

CHEMICAL:		Lake: Town:	DUNKLEE I	POND		
	20 January 1992		19 August 1991)1	
DEPTH (m)	1.0	1.5	1.0			
pH (units)	6.2	6.3	7.0			
A.N.C. (Alkalinity)	13.5	15.2	11.1			
NITRATE NITROGEN	0.08	0.06	< 0.05			
TOTAL KJELDAHL NITROGEN						
TOTAL PHOSPHORUS	0.006	0.008	0.011		·	
CONDUCTIVITY (µmhos/cm)	126.3	138.0	124.2			
APPARENT COLOR (cpu)			23			
MAGNESIUM			1.45			
CALCIUM			5.9			
SODIUM			13.9			
POTASSIUM			1.23			
CHLORIDE	21	24	26			
SULFATE	9	9	6			
TN : TP						
				T		

All results in mg/L unless indicated otherwise

TROPHIC CLASSIFICATION: 1991

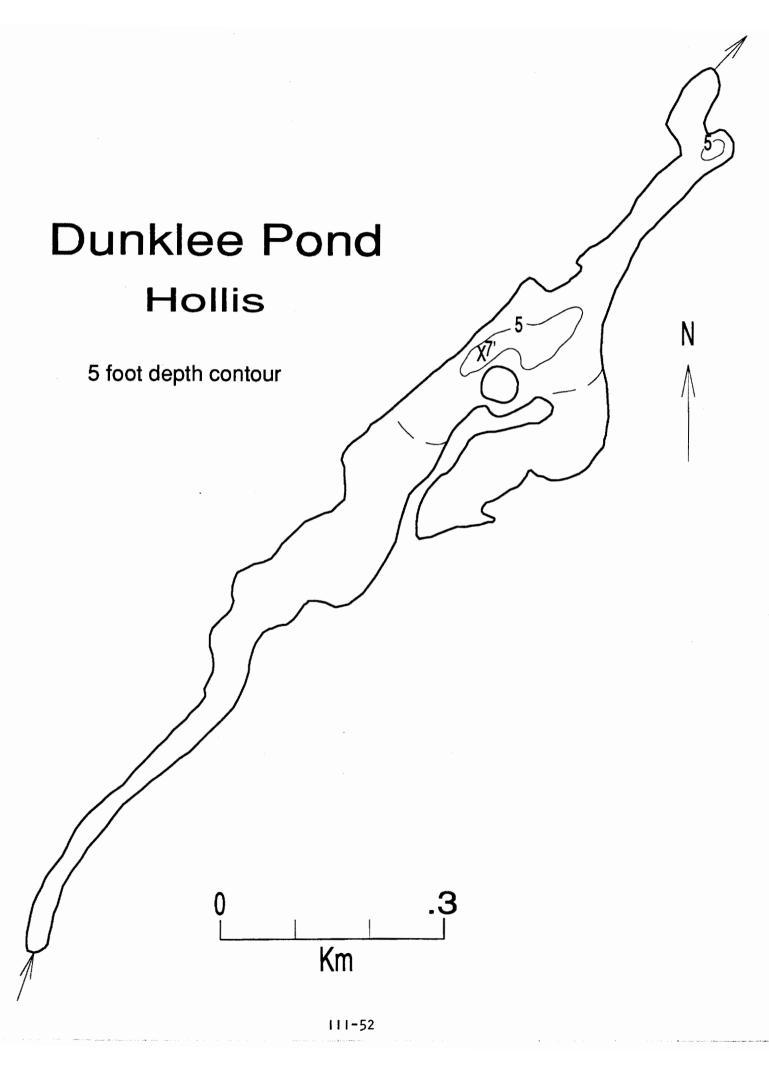
CALCITE SATURATION INDEX

D.O.	S.D.	PLANT	CHL	TOTAL	CLASS
**	3	6	1	10	Eutro.

2.5

COMMENTS:

- 1. Also known as Pennichuck Brook Pond II.
- 2. This pond was listed in NHSPP (1964) as Unnamed Pond #1.
- 3. Town forest and conservation area was located around the pond. Access was through a locked gate. Access was steep and dirt.
- 4. This pond is more wetland than pond.
- 5. No wholewater plankton analysis was completed.



FIELD DATA SHEET

LAKE: DUNKLEE POND

TOWN: HOLLIS

DATE: 08/19/91

WEATHER: RAINY & WINDY (HURRICANE BOB)

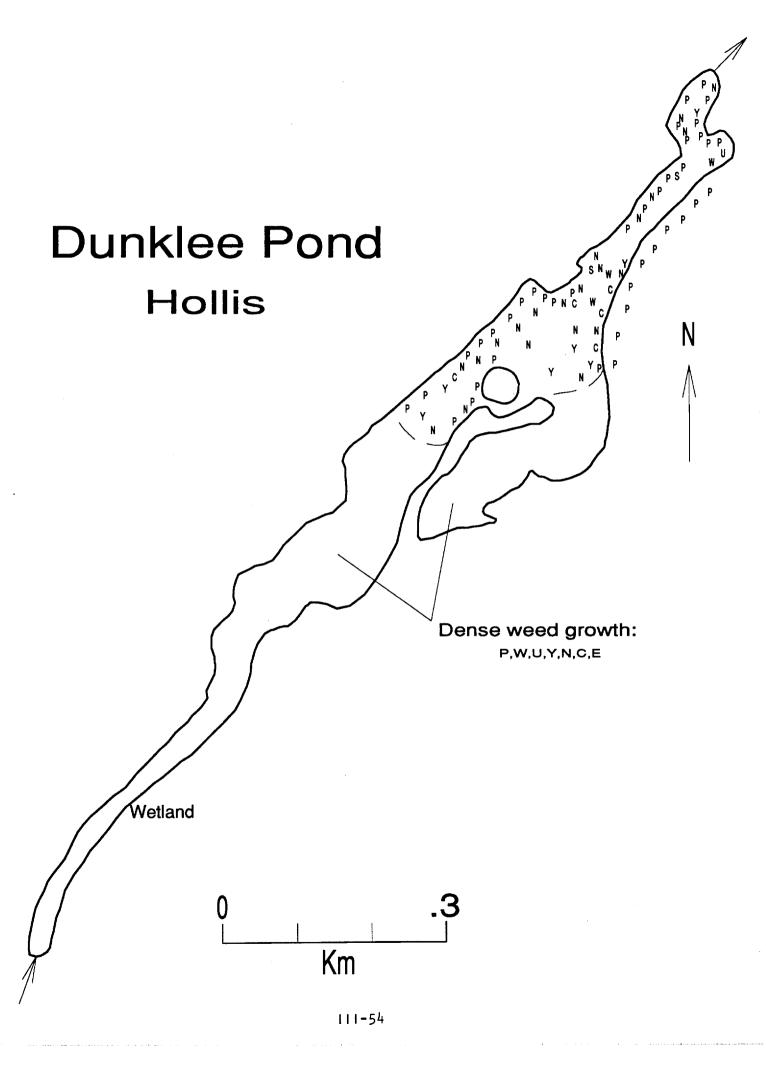
	DEPTH (M)	TEMP (°C)	*DISSOLVED OXYGEN	OXYGEN SATURATION
	0.1	18.5	7.2	76 %
	1.0	18.5	7.0	74 %
	1.5	18.5	6.9	72 %
_				

SECCHI DISK (m): 1.8 VOB COMMENTS:

BOTTOM DEPTH (m): 1.8

TIME: 1145

*Dissolved oxygen values are in mg/L



AQUATIC PLANT SURVEY

LAK	E: DUNKLEE POND	TOWN: HOLLIS	DATE: 08/19/91
Key	PLANT	1000000000	
LCy	GENERIC	COMMON	ABUNDANCE
P	Pontederia cordata	Pickerelweed	Abundant
W	Potamogeton	Pondweed	Abundant
ប	Utricularia	Bladderwort	Very abundant
Y	Nuphar	Yellow water lily	Abundant
N	Nymphaea	White water lily	Abundant
С	Cyperaceae	non-flowering sedge	Very abundant
E	Eriocaulon septangulare	Pipewort	Common
x		Sterile thread-like leaf	Very abundant
S	Sparganium	Bur reed	Scattered
1			

GENERAL OBSERVATIONS:

- 1. South half of pond was a wetland.
- 2. Most of the pond had dense growths of emergent vegetation, and the entire bottom of the pond was covered with bladderwort and sterile, thread-like plants.

OVERALL ABUNDANCE: Very abundant